A Beginner's Guide to Common Network Services

DHCP, DNS and Web Services
On Windows, Linux & NetWare

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Chapter 2 - Introduction

About the Author

Craig Johnson has worked with computers since typing his first program on punch cards in the Fortran language at Purdue University in 1971. When the PC revolution began in the early 1980's, he was working at Honeywell, building new systems from parts and learning how to make different systems interoperate. After leaving Honeywell in 1994, he became a Systems Consultant for a national computer parts and services company, working primarily in Arizona. Craig left to form his own company (Craig Johnson Consulting) in 2000.

In 1998, Craig became one of a select group (less than 35 individuals at any one time, worldwide) of volunteers known then as Novell Sysops, and now as Novell Knowledge Partners. By 1999, Craig was heavily involved with Novell's BorderManager software, releasing his first e-book on Packet Filtering in September of that year. The following year Craig released the first version of his book on BorderManager. Both books were periodically updated thereafter, and greatly shortened versions of his BorderManager e-book were included on the BorderManager 3.7, 3.8 and 3.9 product CD's.

Craig lives in Phoenix, Arizona, with an office in Carefree, Arizona. When not spending time working on computers, he is an avid photographer and scuba diver, and he teaches Taekwondo. Craig is a 4th degree black belt in the American Taekwondo Association.

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Chapter 3 - Overview

What Is Covered

This book covers the basic concepts, requirements and configuration of several commonly used network services, on Windows, Linux and NetWare operating systems. This book covers DHCP, DNS and Web Services.

This book is intended for a beginning audience not intimately familiar with the concepts or procedures of setting up and using these services.

I want to restate the concept behind this book – **it is designed to help *beginners* get a new system up and running quickly and easily,** without a lot of bells and whistles or extraneous (and often confusing) information. This is particularly true for web services. On the other hand, the DHCP section has some more advanced options, such as DHCP relay and dynamic DNS. The DNS section is somewhat in-between. In all cases, there are simple, easy-to-follow examples to show you exactly what to do to get a first system up and running.

This book will explain the concepts behind each network service, and show how to configure each service in a cookbook-like manner showing screenshots and explanations of how to get the services set up. This book does not try to cover all options, but will concentrate on the most commonly-used options. The reader is given the necessary information to understand how to get started on configuring the services, to the point that he or she can then go on to understand the concepts and instructions in more complicated scenarios and explanations. However, if the reader only needs a basic configuration, this book will provide a good example.

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More Details

DHCP

The origins and concepts behind DHCP (Dynamic Host Configuration Protocol) are explained, along with:

- explanations of what options normally need to be configured
- examples of address ranges to reserve for DHCP and non-DHCP devices
- when single or multiple DHCP servers may be desired
- how to forward DHCP requests over routers to a centralized DHCP server
- Exporting and importing DHCP records are shown so that the reader can transition DHCP services from one server to another, using any of the three operating systems shown in this book. Exporting and importing DHCP records is limited to the same operating system.

Example configurations are shown on Windows 2003 Server, SUSE Linux Enterprise Server (SLES) 10, and NetWare 6.5.

DNS

The origins and concepts behind DNS (Domain Name Services) are explained, along with:

- Explanations and examples are given of the most common options needed.
- The use of forward and reverse zones are explained and shown in examples.
- Certain types of DNS record types NS (Name Server), MX (Mail Exchange) and PTR (Pointer) are explained and shown in examples. In particular, DNS records that relate to SMTP mail servers are covered and shown in examples.
- Zone transfers are explained and shown in examples, including how to have DNS servers running under Windows, Linux or NetWare exchange information between each other.
- Exporting and importing DNS records are shown so that the reader can easily transition DNS services from one server to another, using any of the three operating systems shown in this book.
- An explanation is given of how to use both internal and external DNS services at the same time. Example

configurations are shown on Windows 2003 Server, SUSE Linux 10, and NetWare 6.5.

Web Services

Although web services are perhaps the most complicated service covered in this book, only the simpler configuration options are shown. The use of database queries, PHP, CGI and other advanced concepts are left to other books to explain. This book concentrates on getting the reader going with a relatively simple web page in a short amount of time. However, the book covers more than just bringing up a web page that says 'under construction'.

- The use of multiple web sites per web server (using both software and hardware virtual servers) is shown
- How to customize the location of the document directory, how to make use of style sheets, and how to redirect HTTP input to HTTPS input for better security is shown.
- Example configurations are shown using IIS (Internet Information Services) on Windows 2003 Server, Apache on SUSE Linux 10, and Apache on NetWare 6.5.